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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/777,559	02/11/2004	Eric L. Andersen	200311404	5752

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EXAMINER

TYLER, NATHAN K

ART UNIT	PAPER NUMBER
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2625

NOTIFICATION DATE	DELIVERY MODE
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ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No. 10/777,559	Applicant(s) ANDERSEN ET AL.	
	Examiner NATHAN K. TYLER	Art Unit 2625	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 February 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 38,41-43 and 45-54 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 38,41-43 and 45-54 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. Applicant's arguments with respect to claims 38, 43, 47, and 49 have been considered but are moot in view of the new ground(s) of rejection.

2. Applicant's arguments with respect to claims 46 and 53 have been fully considered but they are not persuasive.

Applicant argues that the combination of Andersen and Lodwick does not teach or suggest defining a scan centerline at a location equally between first and second calibration features. In response, the Examiner respectfully disagrees.

Andersen discloses using the single calibration mark to find a scan centerline (“target 36 can be considered to be at a known location at the center of the target page 34” at paragraph [0026]). As discussed in the previous office action the combination of Lodwick and Andersen suggests printing a second calibration feature after a 180 degree orientation change to the medium. This second calibration mark will now be printed, presumably at the center. However, any offset applied to the first mark will be applied equally and oppositely to the second mark due to the 180 degree orientation change. Lodwick also teaches calibration by measuring the distance between two points (“the distance between points F and G can be calculated as 1/2 inch... Furthermore, since the distance between the right-hand margin mark 185 and the right

edge 189 of the first calibration sheet 180 is desired to be a specific distance, e.g., one inch, an error between the desired distance and the measured distance can be determined. The processing software can then provide the necessary adjustments automatically” at column 7, line 39). If both marks should be printed in the center, the expected distance should be zero, and any measurement other than zero could be used to determine the scan centerline.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 38, 41, 42, and 45-54 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Andersen et al. (US 20020165685 A1), Lodwick et al. (US 6226419 B1), and Shimada et al. (US 6310637 B1).

Regarding **claim 38**, Andersen discloses a method comprising: locating a position of at least one calibration feature printed upon a medium (Fig. 7, step 62 “Determine calibration value from the lateral position of the scanned target”); and adjusting a calibration characteristic based on the located position of the at least one calibration feature (Fig. 7, step 66 “Adjust lateral position of scan line window”), wherein the printing of the at least one calibration feature on the

medium comprises: inserting the medium into a printer with a first orientation; printing a first calibration feature at a first lateral location on the medium (Fig. 7, step 52 “produce target from stored image”).

Andersen does not disclose reinserting the medium into the printer with a second orientation rotated 180 degrees from the first orientation; and printing a second calibration feature at a second lateral location on the medium, wherein the first and second calibration features are printed on a same face of the medium.

Lodwick teaches creating a first calibration feature on one face of a print medium and a second calibration feature on the opposite face of a print medium (“Another approach requires the user to print a duplexed (two sided) calibration page. The user then holds the page up to a light to determine a set of lines on each side which line up correctly “). Although Lodwick does not explicitly state that the page is reinserted after a 180 degree rotation, it is well known in the art to create a duplex printed page by printing one side, then manually reinserting the page into the printer with an orientation rotated 180 degrees from the first orientation (flipped over).

Lodwick does not explicitly disclose that the two calibration marks are printed on the same face of the medium. However, Shimada teaches that it is known in the art to print more than one calibration mark on the same face of a medium (See Fig. 20, showing a plurality of single-way and dual-way test patterns).

Lodwick teaches printing two calibration marks after reinserting the medium with an orientation change. Because there are a limited number of possible orientations for inserting a page into a printer, and because it is known in the art to print multiple calibration marks on the same face of a medium as taught by Shimada, it would have been obvious at the time the

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invention was made to one of ordinary skill in the art to try reinserting the medium into the printer with a second orientation rotated 180 degrees from the first orientation; and printing a second calibration feature at a second lateral location on the medium, wherein the first and second calibration features are printed on a same face of the medium, as taught by Lodwick and Shimada.

Regarding **claim 41**, the combination of Andersen, Lodwick, and Shimada as applied to claim 38 discloses that the first calibration feature comprises a longitudinally oriented line (Andersen Fig. 3, numeral 36 is a longitudinally oriented line) and wherein the second calibration feature comprises a longitudinally oriented line (Because Andersen shows the calibration target as a longitudinally oriented line, Andersen as modified by Lodwick would provide the same longitudinally oriented line on both sides of the print medium. Lodwick also suggests longitudinally oriented lines to be used for both calibration features: “to determine a set of lines on each side which line up correctly” at Lodwick column 2, line 18).

Regarding **claim 42**, the combination of Andersen, Lodwick, and Shimada as applied to claim 38 discloses that the first and second calibration features are printed at an substantially identical position relative to a center line of the printer (“The target 36 is preferably a substantially laterally centered vertical line”) so that the first and second calibration features are located substantially laterally symmetrically about a center line of the medium (Because both targets are printed on the center line of the page, and because the two targets are printed with a 180 degree rotation, any misalignment of the printer will cause the two lines to be symmetrical about the center line of the medium).

Regarding **claim 45**, the combination of Andersen, Lodwick, and Shimada as applied to claim 38 discloses that the adjusting of the calibration characteristic based on the located position of the at least one calibration feature comprises: locating a first position of a first calibration feature on a medium; locating a second position of a second calibration feature on the medium; and adjusting a lateral calibration characteristic based on the first position and the second position (Because Andersen discloses adjusting a lateral calibration characteristic based on the located position of the first calibration feature (Fig. 7, step 62), it is reasonable to conclude that the combination of Andersen and Lodwick would use the location of both calibration features to adjust a lateral calibration characteristic).

Regarding **claim 46**, the combination of Andersen, Lodwick, and Shimada as applied to claim 38 does not disclose the step of adjusting a lateral calibration characteristic comprises defining a scan center line at a location equally between the first and second positions. However, Lodwick does disclose performing a lateral calibration by comparing the actual distance between two calibration features with an expected distance (“the distance between points F and G can be calculated as 1/2 inch... Furthermore, since the distance between the right-hand margin mark 185 and the right edge 189 of the first calibration sheet 180 is desired to be a specific distance, e.g., one inch, an error between the desired distance and the measured distance can be determined. The processing software can then provide the necessary adjustments automatically” at column 7, line 39). Because both calibration features are printed in the center of the page as disclosed by Andersen, the expected distance between the two features will be zero. It would have been obvious at the time the invention was made to one of ordinary skill in the art to further modify the calibration system disclosed by Andersen to calculate the printer offset, and thus the

center scan line, by comparing the measured distance between two calibration features with an expected distance as taught by Lodwick, in order to better correct printer misalignment.

Regarding **claim 47**, Andersen discloses an apparatus comprising: a scan head (Fig. 1, numeral 12 "scanner"); a locator communicating with the scan head and configured to determine a position of at least one calibration feature on a medium ("After the target is scanned (step 58), by analyzing the data file the processor 28 determines the pixels 24 that scanned the target 36, and thus the lateral position of the target" at paragraph [0029]); and an adjuster configured to accept the determined position from the locator and to determine a calibration characteristic based in part on the determined position ("A calibration value representing the lateral position of the target page is stored in the processor 28 (step 64) for adjusting the scan line window width in later scan jobs" at paragraph [0030]).

While Andersen does not explicitly disclose determining the positions of a first calibration and a second calibration feature on a face of a medium, it would have been obvious at the time the invention was made to one of ordinary skill in the art to modify the calibration apparatus accordingly with modifications made to the calibration targets as taught by Lodwick and Shimada and explained in the grounds for rejection for claim 38.

Regarding **claim 48**, Andersen discloses a print mechanism configured to accept the medium from the media feed and print the at least one calibration feature on the medium ("The printer 18 is preferably used to print the target page 34" at paragraph [0026]).

Regarding **claim 49**, the combination of Andersen, Lodwick, and Shimada as applied to claim 38 discloses a first calibration target print mechanism configured to cause the print mechanism to print a first calibration feature at a first lateral location on the medium (see

grounds for rejection for claim 40); a medium reinsertion mechanism triggered by the first calibration target print mechanism configured to trigger reinsertion of the medium into the print mechanism reoriented by 180 degrees from an original orientation (see grounds for rejection for claim 40); and a second calibration target print mechanism configured to cause the print mechanism to print a second calibration feature at a second lateral location (see grounds for rejection for claim 40) in known relation to the first lateral location on the medium after reinsertion (The printer will attempt to print both calibration features in the center of the page).

Regarding **claim 50**, while the combination of Andersen, Lodwick, and Shimada as applied to claim 38 does not disclose that the medium reinsertion mechanism comprises a prompter configured to prompt reinsertion of the medium into the printer, it is well known in the printer art to provide a prompt to a user during dual sided printing to reinsert the print medium after the first side has been printed [official notice].

Regarding **claim 51**, while the combination of Andersen, Lodwick, and Shimada as applied to claim 38 does not disclose that the medium reinsertion mechanism comprises a feed tray configured to rotate the medium 180 degrees from the original orientation, it is well known in the printer art to provide a printer with a feed path configured to automatically reorient a print medium 180 degrees in order to perform dual sided printing [official notice].

Regarding **claim 52**, the combination of Andersen, Lodwick, and Shimada as applied to claim 38 discloses that the locator is configured to determine a first lateral feature parameter and a second lateral feature parameter of a calibration target (see grounds for rejection for claim 45), the first and second lateral feature parameters offset by a printer offset (both features are inherently offset by a printer offset when they are printed) and wherein the adjuster is configured

to accept the first and second lateral feature parameters from the locator and to determine a lateral calibration characteristic based in part on the first and second lateral feature parameters (see grounds for rejection for claim 45).

Regarding **claim 53**, the combination of Andersen and Lodwick as applied to claim 46 discloses that the adjuster is configured to determine a scan center line at a location equally between the first and second positions (see grounds for rejection for claim 46).

Regarding **claim 54**, the combinations of Andersen, Lodwick, and Shimada as applied to claim 38 discloses that the adjuster is configured to determine the lateral calibration characteristic based in part on the known lateral relation of the first and second lateral locations (see grounds for rejection for claim 45).

5. Claim 43 is rejected under 35 U.S.C. 103(a) as being unpatentable over the combinations of Andersen, Lodwick, and Shimada as applied to claim 38 above, and further in view of Nakajima (US 7006246 B1).

Regarding **claim 43**, the combination of Andersen, Lodwick, and Shimada as applied to claim 38 does not explicitly disclose the step of printing a directional indicator prior to the reinserting step showing the second orientation for reinsertion of the medium.

Nakajima teaches the use of a directional indicator to show proper orientation or a print medium (See Fig. 6)

It would have been obvious at the time the invention was made to one of ordinary skill in the art to provide the calibration system disclosed by the combination of Andersen, Lodwick, and

Shimada as applied to claim 38 with a directional indicator as taught by Nakajima to assist the user in orienting the page during the 180 degree orientation change during duplex printing.

Conclusion

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to NATHAN K. TYLER whose telephone number is (571)270-1584. The examiner can normally be reached on M-F 7:30am - 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, King Poon can be reached on 571-272-7440. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/King Y. Poon/
Supervisory Patent Examiner, Art Unit 2625

/Nathan Tyler/
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